

ABSTRACT OF THE DISCLOSURE

A method for remote incremental program verification includes receiving content verified by at least one content provider, installing the content on a resource-constrained device and issuing the resource-constrained device to an end user. The content includes at least one program unit and each program unit includes an Application Programming Interface (API) definition file and an implementation. Each API definition file defines items in its associated program unit that are made accessible to one or more other program units, each implementation includes executable code corresponding to the API definition file and the executable code includes type specific instructions and data. The verification includes determining binary compatibility of earlier program unit implementations with later program unit implementations using their associated API definition files. According to one aspect, subsequent installation of content on the resource-constrained device is disabled. A resource-constrained device includes a memory for providing content verified by at least one content provider and a virtual machine that is capable of executing instructions included within the content. The content includes at least one program unit and each program unit includes an Application Programming Interface (API) definition file and an implementation. The verification includes determining binary compatibility of earlier program unit implementations with later program unit implementations using their associated API definition files.